

CLAIMS

1. A device for reducing and preventing ice deposits on a suspended line, the device comprising: an energy gathering module operatively connected via a trigger
5 mechanism to an energy delivery module, wherein the energy delivery module is further connected to one or more suspended lines, and wherein the device may be activated via the trigger mechanism to cause energy to be transferred from the energy delivery module to the suspended line so as to cause motion in the line, thus reducing and preventing ice deposits.
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2. The device of claim 1 further comprising an energy storage module wherein the energy storage module is operatively linked to the energy gathering module such that energy gathered by the energy gathering module is stored by the energy
15 storage module, and wherein the energy storage module is further operatively connected to the trigger mechanism, and wherein the device may be activated via the trigger mechanism to cause energy to be transferred from the energy storage module to the suspended line.
3. The device of claim 1 wherein the energy gathering module comprises a wind
20 driven turbine.
4. The device of claim 1 wherein the energy gathering module comprises a shape memory alloy actuator.
- 25 5. The device of claim 1 wherein the energy gathering module comprises a pendulum and with a clutch/gear assembly.
6. The device of claim 1 wherein the energy gathering module comprises a
30 solenoid.

7. The device of claim 1 wherein the energy gathering module comprises a photovoltaic cell.
8. The device of claim 1 wherein the energy gathering module comprises a direct
5 wire tap to a power line.
9. The device of claim 1 wherein the energy gathering module comprises an inductive coil wrapped around a power line.
- 10 10. The device of claim 1 wherein the energy storage module comprises an elastic storage device.
11. The device of claim 10 wherein the elastic storage device comprises one or more
15 springs.
12. The device of claim 1 wherein the energy storage module comprises a raised weight.
13. The device of claim 1 wherein the energy storage module comprises a
20 pressurized vessel.
14. The device of claim 1 wherein the energy storage module comprises a battery.
15. The device of claim 1 wherein the energy storage module comprises a capacitor.
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16. The device of claim 1 wherein the trigger mechanism is triggered by meteorological conditions.
17. The device of claim 1 wherein the trigger mechanism is triggered by line
30 conditions.

18. The device of claim 1 wherein the trigger mechanism is triggered remotely.
19. The device of claim 1 wherein the trigger mechanism is selected from the group
5 consisting of: a bimetallic strip, a shape memory alloy actuator, a
container/cantilever system, and a weight/slide system.
20. The device of claim 1 wherein the energy delivery module is selected from the
group consisting of: a cam shaft and a solenoid.

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